



Type: Newsletter

Newsletter and Proceedings of the S.E.H.A., no. 114
(June 2, 1969)

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Published by: Society for Early Historic Archaeology, Brigham Young
University

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114.0 SOME TECHNIQUES AND MATERIALS EMPLOYED BY ANCIENT EGYPTIAN EMBALMERS. By Petrus A. de Haan. A paper read at the Eighteenth Annual Symposium on the Archaeology of the Scriptures and Allied Fields, held at Brigham Young University on October 12, 1968. (Mr. de Haan is a graduate archaeology student at Brigham Young University.)

Ever since Joseph Smith acquired the mummies and papyri of the Lebolo-Chandler collection in 1835, the Church of Jesus Christ of Latter-day Saints and its scholars have been extremely interested in Egyptian antiquities. With the recent finding of pieces of papyrus that had been in the possession of Joseph Smith, this interest has taken on a renewed vigor. Part of this interest is focused on the papyrus fragments themselves, but some is also directed towards the mummies in the original collection. While much has been said about these mummies, little attention has been given to the method of their embalming; and it is this area, Egyptian embalming, with which this paper is concerned.

In Genesis 50:2, 26, we are told of the embalming of Jacob and Joseph, but while the scripture mentions that the process took 40 days, we are not told of what the process consisted. And in the case of the mummies of the Lebolo-Chandler collection, the only knowledge we have is that they were of the first order of embalming and, according to the Prophet's statement, that one of them was a pharaoh of Egypt. But, again, we are given no explanation of the process of embalming. It is my purpose to explain the process of embalming in Egypt and thereby to increase the understanding of the method which must have been used not only in the case of Joseph and Jacob but also in the case of the Lebolo-Chandler mummies.

There are few words which cause one to think of Egypt as quickly and easily as does the word "mummy." Until recently mummies always referred to

Egypt, but today "mummy" is a general term meaning a body of almost any once-living thing which is preserved by any means. A technical meaning for "mummy" is any body of a once-living thing which has been *intentionally* preserved or embalmed. Speaking technically, there are few if any remains which show the skill of ancient embalmers as do the mummies of Egypt. Among Egyptian mummies none have shown a higher degree of technology than those of human beings.

The history of Egyptian embalming covers a period of about three thousand years. In a general sense we could extend this period since some extremely well preserved bodies have been found of the Neolithic Age, but these were preserved naturally like those found in the New World. The beginnings of mummification in Egypt lie sometime in the Neolithic Age, while that of embalming or intentional mummification does not appear until the Second Dynasty or c. 2800 BC. There are indications, however, that some experimentation was carried out prior to this time. It was not until after the Pyramid Age of the Fourth and Fifth Dynasties (c. 2640-2350 BC) that embalming was fully developed. During the Fourth and Fifth Dynasties more time was spent in making the outside of the mummy life-like than in actually preserving the body. This was done by modeling the last layer of linen, while it was still pliable, into a representation of the deceased. The corpse was sometimes covered with plaster after the last linen bandages were in place and then modeled and/or painted to represent the living likeness of the person. By the beginning of the Middle Kingdom (Twelfth Dynasty, c. 1990 BC), the practice of modeling the body in linen or plaster had been abandoned and the classical embalming methods adopted.

The technique of embalming which was used during the Middle Kingdom and continued until the decline of Egyptian civilization is often either

misunderstood or wrongly explained, since we have no useful accounts of the technique recorded by the Egyptians themselves. The only first-hand, observed information we have on the procedure is that provided by the Greek writers Herodotus and Diodorus Siculus. Even a brief and cursory look through the standard library reference works shows an inconsistency in the reports, and it is clear that much confusion still exists concerning the complicated technique of embalming.

The basic process as practiced during the Middle Kingdom consisted of desicating the body. But there were a number of other processes that should be mentioned. In order to understand them, it is necessary to keep in mind the purpose of embalming. The Egyptians had a strong religious belief in a life after death, where a body identical to the mortal body was a necessity. The kings or pharaohs of Egypt were believed to be sons of Re, the sun god, and as such they were gods themselves. And certainly if anyone needed to have a body in the hereafter, it was a god. Although the soul or Ka did not actually join the corpse in the hereafter but used it as a focal point for continued existence, because of the need for a body, mummification was developed primarily for kings. In later times it came also to be used by nobles and finally the peasants.

The embalmer had two main purposes or goals which he tried to achieve with his work. These goals were: (1) the preservation of the tissues, and (2) the preservation of the living likeness. In order to preserve the living likeness the embalmer could accomplish only so much after which the artisans aided him by creating statues, paintings, and coffins that looked as much as possible like the person in life.

With respect to the three classes of people (kings, nobles, and peasants), we can also find three classes of embalming. Each class or order of embalming was of a different price and corresponded with the amount of work to be performed to preserve the body. In the first and most costly method (usually reserved for the Pharaoh because of his social standing and his ability to pay), the body was eviscerated through an incision in the left flank. All of the internal organs but the heart—which was considered to be the seat of thought and memory—and occasionally the kidneys, were removed. Usually the brain was removed with an iron hook through the nose, breaking the ethmoid bone in the process. (In one known case, that of the mummy of Ahmose I, the brain was extracted through the foramen magnum.)

The corpse was then desicated and prepared for wrapping. There were a number of oils, spices, and wines used during the process but they had no embalming properties or value and were probably ritualistic in nature. During the ritual cleansing of the

corpse and prior to being wrapped, all the body cavities were stuffed with resin-soaked linen and aromatic sawdust. During the Period of the Decline almost any substance was used for this purpose, including dirt and potsherds. The viscera were cleansed and placed in a set of four vases known as canopic jars. As the embalming art developed, the viscera were wrapped in linen bandages and placed in the body cavity instead of in the canopic jars. Prior to being placed in the coffin the body was wrapped in linen bandages in a manner similar to that of our own method of bandaging injuries. The amount of linen used varied greatly, but approximately 375 square meters were enough for the wrapping. In one mummy of the Eleventh Dynasty enough additional linen was used in the coffin to bring the total to 845 square meters (Mertz, p. 316).

The second class of embalming made use of cedar oil or oil of turpentine which came from a juniper instead of a cedar. The body was prepared in the same way as in method number one, but it was not as expensive since the viscera were not removed and embalmed separately. Instead viscera were dissolved by means of the cedar oil or oil of turpentine, which was injected through the anus into the body cavity. The anus was plugged and after a number of days the dissolved internal organs were let out through the anus. There is some evidence that cedar oil was also used to remove the brain, as there are a number of mummies of this class in which the ethmoid bone was not broken. Since the cedar oil had to pass through the numerous convolutions of the intestines, considerable pressure would be needed; this indicates that a syringe of some sort was used. There is no direct archaeological proof that such an instrument was used in connection with human embalming, but there is some indirect archaeological evidence of this. (Such instruments, in fact, have been discovered among *animal* embalming refuse. While excavating the Bucheum, a burial place for the sacred cows which were the mothers of the sacred Buchis Bulls, Sir Robert Mond discovered two implements which appear to be parts of syringes. Upon careful examination by a professor of veterinary medicine, these implements were identified as a vaginal douche and an instrument for administering anal enemas, remarkably similar to modern veterinary instruments for the same purpose. Their association with embalming material and the fact that the cows were mummified in the manner of the second order seem to indicate that they had been used to introduce the cedar oil into the bodies of the cows. It therefore seems highly probable that similar instruments were used in human embalming of the second class.)

The third method of embalming was not only the cheapest but also the simplest and could have been developed to satisfy the peasant demands for a place in the hereafter. This method consisted simply in desiccating the body without making any attempt to remove the internal organs. The corpse was then wrapped and buried.

Up to this point the actual process by which the tissues were preserved has been ignored, although a hint has been given by the use of the word "desicate." The human body can be preserved by any of a number of ways, but three methods are best. These methods are: (1) cold storage, which the Egyptians certainly did not know; (2) the injecting of germicidal and antiseptic fluids, which diffuse through the tissues and preserve them (the modern way of embalming); and (3) dehydrating or desiccating the body. Any of these methods can preserve the body indefinitely, but the only one available to the ancient Egyptians was method number three, desiccation.

Since the human body consists of about 75% water, drying it represents a major problem. Actually there are a number of ways this can be done: by fire, by the heat of the sun, or by the use of a desiccating agent. During the early history of Egyptology, a number of people proposed that fire was used by the Egyptians to dry the bodies. The evidence to back up this proposition was based in part on the fact that many tombs were smoke-blackened.

Yeivin, who was associated with the Mond Excavation of the tomb of Haiyaiy at the necropolis of Thebes, tells us that "the mummies, to judge from their appearance, seem to have been dried over a slow fire, which would explain the smoky appearance of all the chambers and passages above" (Lucas, p. 273). It appears from this statement that Yeivin was more concerned with explaining the smoky chambers than in explaining the method of desiccation used. There are other logical reasons as to why those chambers were smoke-blackened; for example, the tombs may have been blackened by sightseers or tomb robbers using smoky torches. We also know that there have been occasions when ancient Egyptian authorities quelled tomb robbers by building a fire in the entrances to the tombs. Actually there is a complete lack of evidence supporting the theory of drying the corpse by artificial heat, and drying the body by the heat of the sun would have been so time-consuming as to be worthless.

In any event, neither fire nor the heat of the sun was necessary since there was an abundant supply of natural desiccating agents available. Lime, common salt, and natron are the three desiccating agents readily and cheaply available. There is no evidence that lime was ever used in mummification even though a Twelfth Dynasty mummy exhibits a content of 8.6% calcium

carbonate. This percentage can be attributed to the use of lime, but it was probably due to the fact that the coffin was made of limestone and the tomb was located in a limestone district.

The question as to whether salt or natron was the desiccating agent has been the main issue. G. Elliot Smith and Warren R. Dawson say that during the Christian period, salt was used for mummification (Smith, p. 151). Until recently most scholars accepted this statement, but it must be pointed out that these were mummies preserved after the decline of Egyptian civilization and cannot be compared to mummies prepared in the classical Egyptian style. Smith and Dawson also say that the body was soaked in a salt bath (Smith, p. 35). Warren R. Dawson has even gone so far as to say that "in general terms it may be said that for the immersion bath common salt (mixed with various impurities) and not natron was used." As to what is meant by common salt, G. Elliot Smith explains that it is chloride of sodium (Lucas, p. 275).

The presence of sodium chloride in mummies has been demonstrated, but not proved to have been a result of the embalming process. In a Twelfth Dynasty mummy enough chlorine has been found to represent about 5% salt. In the mummy of Tutankhamen a few salt crystals were found on the shoulders, and in a Seventeenth Dynasty mummy found by G. Elliot Smith there was some salt, but not more than would be found in normal body tissues. An embalmer's swab found by Winlock at Thebes contained a trace of salt, but here as in the other examples this could be due to the salt content of the water in which the swab and bodies were rinsed. It has been reported that the mummy of Merneptah (Nineteenth Dynasty, c. 1353-1200 BC) was encrusted with salt, but it was later shown to be a mottling of the skin having the appearance of an eruption. Although there is a small amount of salt present, it is microscopic and did not originate in the embalming process. In Coptic mummies the internal organs are said to have crystals of salt on them but again closer examination showed these white crystals to be not salt but crystals of fatty acids.

The fact that there are generally no incisions in Coptic mummies would also make it impossible for salt, even if it had been used as the desiccating material, to penetrate that deeply into the body. Salt has never been found among refuse embalming material except as an impurity of natron. The expression used by Herodotus for mummification is best translated by a connotation relating to the preservation of fish by salting. The Egyptians made a great deal of use of their abundant salt supply by salting fish to preserve them. Thus early scholars were led to assume that salt was the desiccating agent used by the embalmer, even

though Herodotus specifically states that natron was used.

Natron is a combination of different salts; namely, sodium carbonate, sodium bicarbonate, sodium sulphate and sodium chloride in different proportions. Solid natron has been found in vases, jars, and packages in tombs as well as buried in pits with refuse embalming material. An example is the tomb of Yuya and Tuyu (Eighteenth Dynasty, c. 1580-1353 BC), where refuse embalming material was found in 52 jars, one of which contained a mixture of sawdust and natron. Also the tomb of Tutankhamen had a vase containing natron in it. In describing part of the excavation of the tomb of Meryetamun (also Eighteenth Dynasty) at Thebes, Winlock says that natron was swept into a basket and it appeared that the natron had been dumped from embalming receptacles. Among buried embalming refuse found by Winlock at Deir el-Bahri and dating from the Eleventh to the Thirteenth Dynasties (c. 2100-1700 BC) natron was very evident. Natron was also found encrusting a wooden embalming table from Thebes (c. 2100 BC).

In direct connection with mummies a number of examples of the use of natron can be given. In the case of the mummy of Thutmose III (Eighteenth Dynasty) natron was found on the body mixed with fatty matter. It was also found in the remnants of the brain in the mummy of a boy found in the tomb of Amenhotep II (Eighteenth Dynasty). Natron was also found in solution on two occasions, one being the compartments of the alabaster canopic box of Queen Hetepheres (Fourth Dynasty). This solution proved to be 3% natron and evidently contained the linen-wrapped viscera of the queen (Lucas, p. 280). Thus there is ample evidence that natron was the desiccating agent and it is accepted as such by most modern scholars.

Even though natron has been accepted as the desiccating agent there are still some who argue over the way natron was used. Until recently most scholars maintained that the body was soaked in a solution of natron. This idea of preparing a body for burial by soaking it or placing it in a bath for a number of days became so prevalent that a movie, "The Egyptian," depicted the grisly scene of a number of priests standing around two huge tubs in which some bodies were floating.

The origin of this idea is hard to find, but it could be due to a mistranslation of Herodotus. Carey, Smith, Dawson, Laurent, Long, Wheeler, and Taylor all translate the relevant passage of Herodotus with at least a connotation that the body was put into some type of liquid bath. But Rawlinson, Macaulay, Wilkinson, Godley, Powell, de Selincourt, and Carter translate the same passage with a connotation that is

exactly the opposite. Budge has even gone so far as to say that a tank containing a solution was used in which the body was steeped. If we look at the problem logically we might wonder why anyone would even think of soaking as a step in mummification: since the human body is 75% water, soaking it in any solution would not help to dry it but instead would pickle it.

There are, however, a number of reasons why steeping the body was considered to be a part of the mummification process: (1) the loss of the epidermis; (2) the use of metal thimbles or the sewing on of the finger and toe nails; and (3) packing the body as was done during the Twenty-first Dynasty (c. 1090-945 BC), since the packing could only have been accomplished if the body was soft and pliable, as it would be if the corpse were soaked. All of these reasons appear valid, but all of them have flaws.

Although the loss of the epidermis would in fact be an expected result when the corpse was soaked in a solution for a number of days, the absence of the epidermis does not mean that it was not there. It simply means that when the mummy was unwrapped the epidermis was not seen. In some cases the epidermis was present, as in the case of one mummy examined by G. Elliot Smith. He writes: "Unlike all other mummies examined by me (excepting only those of the Coptic Period) the epidermis was not removed during the process of embalming. It is present, peeled off, it is true, but adhering to the bandages, wherever they came in contact with the body" (Lucas, p. 287). Since this condition was recognized in this case, may it not therefore have been true of others but not recognized? This could particularly be true when the bandages next to the body are in a poor state of preservation, at times being nothing more than a blackened powder.

It is also stated that due to the soaking process and expected loss of the epidermis the nails of the hands and feet were at times sewn onto the flesh or covered with metal stalls. The thimbles were not used, however, to prevent the loss of the nails, regardless of how the body was prepared, since the stalls were placed on the digits after they had been wrapped. Such was the case with Tutankhamen's body, in which gold stalls were placed on the fingers after the embalming process had been completed and the fingers wrapped with linen.

During the Twenty-first Dynasty the practice of packing the body came into use. The intent of the embalmers in packing the body was to preserve the living likeness of the corpse. Up to this time the embalming process left the body in an extremely emaciated condition; the body was little more than skin and bones. In order to overcome this, the body

was given a full and more lifelike look by packing it with resin-soaked linen or sawdust between the skin and the shrunken muscles. This could only have been done while the skin was soft and pliable.

It has been argued that this condition could only have been achieved by soaking the body in a solution. Actually soaking the body would only make the embalming more difficult. G. Elliot Smith says that the muscles and tissues of the body would become a loose spongy mass, or soft, pulpy, and semi-fluid. If the body had been soaked, the packing would have been almost impossible since this required a great amount of manipulation of the corpse. During the packing process numerous incisions were made on the corpse and if the muscles and tissues were in a semi-fluid or liquid state and the epidermis did in fact come off during the embalming, there would have been very little left of the corpse.

There are some who point to the fact that numerous mummies have been found which are not whole individuals or that have arms or legs separated from the trunk, as proof that soaking was the method used by the embalmers. Actually this condition of certain mummies is due to the nefarious ancient occupation of tomb robbing; or in the case of the bodies of women of the nobility, to the fact that these were often turned over to the embalmers only after putrefaction had begun, in an attempt to discourage necrophiliac practices of the priests who were the embalmers. Dismemberment can also be due to careless transportation.

In any event, the argument that a dry method of embalming would not leave the skin in a soft and pliable enough condition to permit "packing" has been refuted by experiments conducted by A. Lucas and A. T. Sandison. Mr. Lucas conducted his experiments on chickens and pigeons, while A. T. Sandison conducted his on human toes, fingers, scalp, arteries, kidneys, liver, and feet. Both men found that the skin remained soft and pliable (Lucas, p. 273-294, and Sandison, p. 265). That a dry method, whether salt or natron, will leave the skin soft and pliable is confirmed by G. Elliot Smith and Warren R. Dawson with the statement that "the effect of this treatment has been to preserve the skin entire, and to render it soft and pliable" (Smith, p. 131). Although they are talking about a mummy from the Christian period which was mummified by salt, it demonstrates the fact that a liquid solution is not necessary to give the skin pliability.

As has been mentioned, A. T. Sandison conducted experiments with human remains to determine whether a liquid solution of natron or a dry natron had been used to preserve the bodies. In his experiments he used solutions of natron which were

stronger and weaker than the 3% solution of natron found in the canopic box of Queen Hetepheres as well as of the same strength. Although Sandison maintains that the results are not conclusive, they do establish that fingernails are not loosened by a liquid solution and that the use of dry natron leaves an appearance most like that of Egyptian mummies. In his experiment with a human iliac and carotid arteries he arrives at the conclusion that "human arteries treated with dry natron attain an appearance similar to, and respond to rehydration like, arteries from Egyptian mummies" (Sandison, p. 266). These experiments and conclusions support the hypothesis that dry natron was the essential desiccating agent used by the ancient Egyptian embalmers.

Anyone reading the published literature concerned with Egyptian mummies will get the impression that bitumen was one of the major substances used in embalming. This is particularly true of the early literature on the subject. One reason for this is the fact that mummies often appear dark brown or even black. It is an erroneous assumption, however, that the dark color is a result of the use of bitumen. Bitumen appears to have been used mainly in the Graeco-Roman period of Egyptian history and even then not always. The color of the mummy is not significant in relation to the use of bitumen since natron causes the body to become dark and the effects of time can cause a further darkening. The Egyptians also used resin as a glue to fasten the bandages and linen shroud. Resin and the effects of natron and time would tend to give the body a very dark appearance. It has also been reported that native workmen often used mummies or parts of mummies as fuel for their fires at night, and that the mummies burned slowly, giving off a great deal of heat. Early Egyptologists assumed that this was due to the bitumen in the mummies, since bitumen is essentially pitch or wood tar and burns slowly giving off a great amount of heat. But here again, the burning qualities may also be due to the resin. There is no positive proof of the presence of bitumen in mummies before the decline of the Egyptian civilization.

Over the entire history of embalming in Egypt it appears that the Egyptians used dry natron effectively to desiccate the body. The use of salt was limited to the Christian and post-Christian periods, while bitumen was never used extensively except in the Graeco-Roman period. As to why natron was used instead of salt which was more readily available, the embalmer may have been influenced by the fact that natron has a stronger de-fatting property. In any event, natron was the desiccating agent used in the classical method of mummification, and the other substances

were mainly ritualistic in nature and had no real preserving properties.

In conclusion it can be stated that the mummies which are of particular interest to the Latter-day Saints—those of the Lebolo-Chandler collection—were undoubtedly bodies of ancient Egyptians embalmed in this manner, just as were the bodies of Jacob and Joseph.

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114.1 THE HOR SEN-SEN PAPYRUS AS A MNEMONIC DEVICE: A FURTHER STUDY. By Richley H. Crapo and John A. Tvedtnes. The authors here offer for consideration and discussion additional details of their research concerning parts of the newly acquired original papyri from which the Book of Abraham was translated by the Prophet Joseph Smith. The following information is the result of research completed since the publication of Newsletter 109, October 25, 1968 (see Article 109.0).

Having shown the feasibility of a mnemonic device used in conjunction with an Abrahamic oral tradition, we feel compelled to present further evidence in support of our theory, and to suggest possible relationships between the patriarch Abraham and the Sen-Sen text.

In the case of Joseph Smith's Alphabet and Grammar, we find not one or two examples of related meanings in the two columns (hieratic on the left, English on the right), but a correlation in each and every case, when comparing the respective Egyptian and English words which Joseph Smith indicated to be related. Thus the strength of the text will not rise or fall on the basis of one or more individual cases, but upon the fact that one finds parallels consistently in every case when examined in the order established by Joseph Smith. The correspondences, as we have demonstrated in the case of the Alphabet and Grammar, are not random, but consistent. It matters not if all the key-words be mere particles (prepositions, articles, and other simple adjectives) or common nouns or verbs. The parallels exist only if one examines the columns as they were set up by Joseph Smith; otherwise, such parallels do not occur in a consistent manner.

Thus, as a test, when we compared the meanings of the Egyptian words to the preceding Book of Abraham verses in each case, and later to following verses in each case, and finally in a similar manner to the equivalent number of Book of Moses verses (which, being written down by the same English speaker, with the same vocabulary and grammatical style, and having a similar subject matter, should provide the greatest number of accidental parallels), relatively few parallels (no more than might be expected by pure chance) were found; and these, for the most part, were not as valid nor as convincing as the parallels to the Book of Abraham, so that the number and consistency of the parallels did not compare with those evident in the verses as Joseph Smith lined them up. Of the 29 divisions made by Joseph Smith (see Fig. 5 of the previous article, Newsletter, 109.0), we found parallels in 29 cases. Thus, the number and the quality of the parallels are important factors to consider. Joseph

Smith's arrangement is consistent in quality and in number of parallels, and while *some* parallels may exist between the Sen-Sen text and any given English text (as some would, by mere chance), it is inconceivable that, using approximately the same ratio of Egyptian to English words as Joseph Smith did, the same number of parallels as appeared in our study of the Book of Abraham would be found.

Moreover, it seems to be more than mere coincidence that many of the Egyptian hieratic words copied by Joseph Smith are semantically reflected in the juxtaposed English text in more than one way, or more than once in the same way. For example, in Fig. 5 of our former paper, the following items appear more than once:

6. *Py*, "this." In Abraham 1:11a the word "this" appears three times, the word "these" appears once, and "the" appears four times.
9. *Wr*, "strong, powerful, great," according to Baer. In Abraham 1:15, the title "Almighty" appears.
Her, "to travel, pass by," according to Nelson. Feet are also determinatives in verbs of motion, such as "walk, run, jump, come, go, stand," etc., and play an important role in the *prayer stance*, for which see Dr. Nibley's comments on Facsimile 1 in *The Improvement Era*, December, 1968, page 31. In Abraham 1:15 we read of Abraham's prayer for deliverance; the words "stood by my feet" appear in the original version on page K of the Alphabet and Grammar. (In our present Book of Abraham, this reads, "stood by me.")
10. *Khonsu*, the moon god, called "The Traveler." In Abraham 1:16-19 we have several references to traveling: "... I have come down... to take thee away...; I have come down to visit them...; I will lead thee by my hand..." Also the god Libnah, spoken of by Abraham, is clearly from the Semitic *levanah*, "the white one (f.)," the Hebrew name for the *moon*. (Note: *v* and *b* are allophones in Hebrew.)
21. *H fr*, "seize, grasp." In Abraham 2:7-9a there are several references to God's control ("grasp") over the earth, especially by use of the body's grasping instrument, the hand: "... I stretch my *hand* over the sea, and it obeys my voice...; my *hand* shall be over thee..." It should be noted that the normal Egyptian word for "grasp" or "seize" (*ʒnm*) is written with the hand (or, sometimes, the arm) as a determinative.
22. *Wj*, the two arms, determinatives of "flesh, body, members." In Abraham 2:9b-11 we find these references: "... in their *hands* they shall bear this ministry...; the seed of the body..." (See also 22a.)
- 22b. *R*, "with": also designates futurity. Continuing an examination of Abraham 2:9b-11, we find that God is making promises regarding the *future*. He promises that through Abraham's seed "... shall all the families of the earth be blessed, even with the blessings of the Gospel..."

The following chart (a continuation of Figure 5 appearing in Newsletter, 109.0), summarizes the balance of our research on the subject of correspondences between the hieratic Sen-Sen text and the English Abrahamic text. Joseph Smith is not known to have shown the parallels that we present in this new chart. Nevertheless, the parallels are striking and provide further evidence for the authenticity of the Book of Abraham. If parallels of equal quality (i.e., in order, and to "verses" of lengths equal to each respective Book of Abraham verse taken in order) cannot be found by a *systematic* comparison of these Sen-Sen text words with any other English text chosen at random, then these parallels constitute a further proof of the special semantic relationship between the Sen-Sen and Book of Abraham texts. Likewise if, at some future date, a document similar to the Alphabet and Grammar, in the hand of Joseph Smith or one of his scribes and showing which Sen-Sen words the Prophet connected with which Book of Abraham passages, should be discovered and proved to correspond significantly with our chart, or to show correspondences which are superior to the data on the chart, this would provide conclusive proof that Joseph Smith knew the meaning of the hieratic words of the Sen-Sen text.

In preparing this chart the balance of the hieratic words, taken in order from the preamble to the Sen-Sen text, were used juxtaposed to the remaining passages (in order) from the Book of Abraham. In many cases homophonous Hebrew words (reflecting the Semitic speech of Abraham) have provided interesting parallels. While many parallels could theoretically be made by comparing the hieratic text of items 30 to 59 with another English text, nevertheless the number of correspondences shown on our chart is *striking* and, we feel, extremely significant.

The first striking correspondence or parallel is in No. 31, where we find as many as eight parallels. By combining the Egyptian *s'it* with *n*, we approximate

No.	Hieratic	Hieroglyphic	Transliteration	Meaning	Notes	B. of A. Ref.	Book of Abraham Context
30				Perhaps "the, this"		2:19	"...and <u>the</u> Lord appeared..." "...will I give <u>this</u> land..."
31			tit	"book" (lit. "writings")	Heb.: tsafat, "trot" Heb.: tsafad, "march, step, advance" (Related to Heb.: tsafan, "wander, migrate, remove [tent].")	2:20-21	"...I, Abraham... <u>removed</u> from thence..." "...and pitched my <u>tent</u> there..." "... <u>inwardly</u> , going or still..." "...to go down into Egypt to sojourn there..."
32			smn	"of, by, to, for"	(See last Heb. word above, ending in n.)	2:22-25	"...place of the altar..." "...there was a continuation of a famine..." "...on the east of Bethel..."
33			rq	"to make an end"	Heb.: 'erek, "order, value, arrangement, comparison, evaluation"	3:1-4	"...the <u>god</u> shall <u>live</u> ..." "...my <u>god</u> shall <u>live</u> ..."
34			ry n	"made by (Isis)"			"I have <u>set</u> this one to <u>govern</u> all those which belong to the same <u>order</u> ..."
35			nty	"who, which"	Heb.: natuy, "stretched out"	3:5-13	"which" occurs 20 times. "... (and his hand was stretched out)..."
36			m	"from, in, by, with"	Heb.: sefer, "book" or "writing," from verb sifer, "declare, tell; count" (Another derivative: mispar, "number.")	3:14-15	"...the Lord <u>spoke</u> these words..." "...is thou canst <u>count</u> ..." "...so shall be the <u>number</u> ..." "...and the Lord <u>said</u> unto me..." "...that we may <u>declare</u> all..."
36			nw	abbrev. of ni nwn "interior, inside"	Heb.: nu', root of verb "restrain, frustrate"	3:16-19	"...and there is nothing that the Lord thy God shall take in his heart to do but what he will do it."
36			wjt	abbrev. of bw r wit, "outside" (i.e., the contrasting things)			Contrasts: "one above the other" (above-below, greater-less, more-less)
37			im	"there (in, on, with, from)"	Heb.: im, "with, among, close to" Heb.: am, "nation, people" (in the sense of an allied community)	3:20-21	"...I dwell <u>in the midst</u> of them..." "...I now, <u>therefore</u> ..." "... <u>wherein</u> ..." "... <u>in the heavens</u> above and <u>in the earth</u> beneath, <u>in all wisdom</u> ..." "... <u>in the midst</u> of all..." "...all the intelligences..."
37a			s	causative prepositional prefix (giving the idea of "making" or "doing")		3:20-21	The Lord <u>caused</u> the angel to deliver Abraham from the priest.
37			m	"from, in, with," etc.			"...the works which my hands have <u>made</u> ..."
37			sm	"united"	Heb.: sam, "set, appoint, ordain, establish" Heb.: sem, "name, reputation, renown" Heb.: sam, "to estimate, evaluate"	3:22-23	"... <u>noble</u> and <u>great</u> ones..." "...these I will <u>make</u> my <u>rulers</u> ..." God " <u>organized</u> " or " <u>united</u> " the intelligences "before the world was."
38			swtr	"byssus, fine (royal) linen"		3:22-23	See above, 36a.
39			rc	"placed at, near, beside" (Also a homonym for the Egyptian sun-God, Ra.)		3:24-25	"...one... <u>like</u> unto <u>God</u> ..." "...he said unto those who were <u>with</u> him..." The <u>gods</u> <u>made</u> plans to <u>place</u> man on the earth.

The Hieratic Figures of the Sen-Sen Papyrus Compared with the Text of the Book of Abraham.
Continued from Newsletter 109, page 5.

No.	Hebrew	Hieroglyphic	Transliteration	Meaning	Notes	Ex. 1, 2, 3, 4	Ex. of Hebrew Context
40	וּמָלְא	𐀓𐀕𐀓	wml	"to tie (wrap) up"	Heb.: wafad, "forever." Heb.: wafad: "committee, meeting" (Note, Heb.: wafut, "and wrapped")	3:26	"...glory added upon their heads for ever and ever..." (mummy wrappings are "added upon" the corpse in layers) Speaks of the council or meeting of the Gods to make plans for the earth.
41	יָמִינָא	𐀓𐀕𐀓	ymn	"left side"		3:27-28	Those rejected with Satan are sent to "the left hand" (the sinister side) at the judgment. (See Matthew 25: 31-34, 41.)
42	יָשָׁרָא	𐀓𐀕𐀓	ysr	"straight forward, precise, in alignment with"		4:1	The earth is set in order. "...the Gods organized and formed the heavens and the earth..."
43	בְּרִיּוֹתָא	𐀓𐀕𐀓	brt	"his heart (breast, front)"	Egyptian homonym is "face, front," with slightly variant spelling.	4:2	"...the Spirit of the Gods was brooding upon the face of the waters..."
44	יָהָא	𐀓𐀕𐀓	yh	"is, are" (to be)		4:3	"...let there be..."
45	עָשָׂה	𐀓𐀕𐀓	esh	"to make (do), done"		4:4-6	Tells what God did during the very first step in the organization of the earth.
46	וַיְהִי	𐀓𐀕𐀓	wh	Simplified <u>𐀓𐀕𐀓</u> , "the, this," often conveying idea of an act having been accomplished (Nelson).		4:7-10	"...and it was so, ever as they ordered..." (this phrase appears twice) "...and the Gods saw that they were obeyed..."
47	וְעַתָּה	𐀓𐀕𐀓	evt	abbrev. of grb n	"at the end, final"	4:11	Conclusion of the organization of the earth itself (minus plants and animals). "...and it was so, ever as they ordered..."
48	וְהָאֵלֹהִים	𐀓𐀕𐀓	h'el	"his, its" (m. poss.)		4:12-13	"...his our seed..." (3 times) "...after his kind..." (twice)
49	וְהָעֵצִים	𐀓𐀕𐀓	h'etz	"to wrap up in linen wrappings"	Heb.: qaras, "box, band"	4:14-19	"...until they obeyed..."
50	וְהָיָה	𐀓𐀕𐀓	h'yh	mis-spelled <u>wh</u> , "this, the" (Nelson)	Heb.: pats, "to be dispersed, scattered"	4:20-25	"...fill the waters in the seas..." (i.e., be dispersed in the seas) "he" appears 21 times.
51	וְהָיָה	𐀓𐀕𐀓	wh	"outside"	Heb.: wafad, "committee, meeting"	4:26-25	"...and the Gods took counsel among themselves..." Preceding verses show the Gods preparing the earth to "bring forth" plants and animals (vv. 11,12,20,21,24,25), but now there is OUTSIDE INTERVENTION in the creation: "...the Gods...said: let us go down and form man..."
52	וְהָיָה	𐀓𐀕𐀓	wh	"as to, if" (for introductory emphasis - Nelson)		4:29-30	"...behold..." (for introductory emphasis)
53	וְעַתָּה	𐀓𐀕𐀓	evt	"to make (do), done"		4:31-5:3	"...we will do everything that we have said, and organize the...and thus we will finish the heavens and the earth...and we will end our work..." (All of this is being done for man, as previously determined in the council.)
54	וְהָיָה	𐀓𐀕𐀓	wh	"writing, book"	(For Heb., see No. 35.)	5:4-6	"...they had said concerning..." "...these the generations of the heavens..." "...there went up a mist from the earth..." "...according to all that which they had..."
55	וְהָיָה	𐀓𐀕𐀓	wh	"this"	Heb.: md, "uniform" (adjective)		
56	וְהָיָה	𐀓𐀕𐀓	wh	"to"	Heb.: 'ad, "mist"		
57	וְהָיָה	𐀓𐀕𐀓	wh	"his breath"	Heb.: nafaš, "soul, breath," from verb nafaš, "breathe"	5:7	"...breathed into his nostrils the breath of life, and man became a living soul..."
58	וְהָיָה	𐀓𐀕𐀓	wh	"like"	Heb.: ml, "who, whose"	5:8-18	"...the man, whose spirit..." "...it was after (i.e., like) the Lord's time, which was after the time of Enoch..." In reference to the "soul": "...let us make an help meet for the man..." "...flesh of my flesh...and they shall be one flesh..."
59	וְהָיָה	𐀓𐀕𐀓	wh	det. for b3, rest missing.	(Heb. ruah is "spirit")		
59	וְהָיָה	𐀓𐀕𐀓	wh	"gods"		5:19-20a	"...the Gods formed every beast..."
59	וְהָיָה	𐀓𐀕𐀓	wh	"to, at, from, concerning"	(This is the mouth symbol.) Also shows futurity.	5:20b	"...and brought them unto Adam to see what he would call (future) them; and whatsoever Adam called every living creature..."
59	וְהָיָה	𐀓𐀕𐀓	wh	"forever & ever" (lit. ., "100,000- i.e., years- & forever")	(Also means "estate")	5:21	Adam named "all cattle...every beast" of his second estate, the earth. (See 3:25-26)

the Hebrew *tsa'an*, meaning "wander, migrate, remove." By "remove" is meant, specifically, the removal of a nomad's tent from one place to another. Verses 20 and 21 of Abraham 2 contain several references to traveling and nomadism.

No. 32 illustrates a remarkable parallel to Abraham's story. When Abraham went into Egypt, he told the Egyptians that Sarai (his wife) was his sister. This he did, fearing that the Egyptians would slay him and take his wife if they knew that they were married. The story as told in Genesis (12:11-13) leads us to believe that Abraham was the instigator of this deception. But the Book of Abraham (2:22-25) indicates that his reply to the Egyptians came as the result of a revelation from the Lord that he would be slain if he did not say that Sarai was his sister. The *Genesis Apocryphon*, a pseudepigraphic work recovered in recent years near the Dead Sea, tells how Abraham received such a revelation in the form of a dream, in which he was represented by a cedar tree and Sarai by a palm. The account is as follows:

Then we left our land and came into the land of the sons of Ham, the land of Egypt. And I, Abram, dreamed a dream in the night, as we came into the land of Egypt. I saw in my dream... behold, a cedar and a palm /////, and there came people who wanted to cut down and uproot the cedar and leave the palm alone by itself. But the palm cried and spake, "Chop not down the tree, for cursed is he who fells [it]," and the cedar was left alone for the sake of the palm and not [cut down]. And I awoke in the night out of my sleep and spake to Sara my wife: "A dream have I dreamed ///// and [I] fear on account of this dream." She said unto me: "Tell me your dream, so that I might understand." And I began to tell her this dream "///// [And] they will attempt to kill me and leave you remaining. On this day, all good in all about me: 'He is my brother' and I will remain alive on account of you and my life will be saved through you." (*Genesis Apocryphon*, 19:13 ff.)

We therefore have a correspondence between the Egyptian word *sensen*, "breathings," and the Hebrew *šansan*, "palm leaf" (both words being written without the vowels in the original languages), in view of the story of Abraham's plight in Egypt with regard to his wife, Sarai (a palm tree in the apocryphal account).

An additional correspondence in No. 32 is the reference to Abraham's "soul." The Hebrew word for "soul" (meaning the body and spirit in unison—see

D&C 88:15-16) is *nefēs*, from the verb *nafās*, "breathe."

No. 34 illustrates perhaps the only group of nine successive verses in all of the Standard Works that employs the word "which" so many times (20). But there is a second parallel with the Hebrew word *natuy*, "stretched out," perfectly reflecting Abraham's statement (in reference to the Lord, who was speaking to him) that "his hand was *stretched out*." The strength of this parallel is increased by the very fact that this statement by Abraham is parenthetical, and that, while it does not add to the clarity of the passage into which it is inserted, it is, nevertheless, used. This would indicate, once again, that whoever originally connected the Abrahamic text with the Sen-Sen text *knew* the pronunciation of the hieratic word (*nty*), which approximates that of the Hebrew.

No. 35 has a number of correspondences. The Hebrew equivalent of the Egyptian *šw*, "writings," would be *šefer*, which is derived from the verb *špfer*, "declare, tell, count," the *f* and *p* being allophones in Hebrew. Another noun derived from this verb is *mišpar*, "number." The use of these words in Abraham 3:14-15 provides much evidence in favor of our thesis.

No. 36 likewise has more than one correspondence. The Abrahamic text at this point indicates that nothing can restrain God from accomplishing that which he "shall take in his heart to do," thus frustrating his work. We therefore have the exactly opposite meaning of the Hebrew verb indicated in the chart.

In No. 37 we have made use of the Hebrew words *im*, "with, among, close to," which is clearly reflected in the text, and *am*, "nation, people." The latter could easily be applied to the community or organization of the "intelligences" or spirits that existed at the time in question in the text.

No. 37a could be combined either with No. 37 or No. 38, for it has a relationship to each. If used with 37, we have additional correspondences in Abraham 2:20-21, in that *s*, transmitting the idea of "making" (or causation, as shown also on the chart), is reflected in the Abrahamic text by the word "made," while *m*, "from, in, with," is reflected in the idea that God was "in the midst" of the intelligences. Additionally, Dee Jay Nelson indicates that what we have labeled 37 and 37a together convey the idea of "thereon is done to," thus bringing us back to the idea of making or of causation, indicated in the corresponding text.

If 37a is combined with 38 as a single word (*sm* or *šm*), we have the Hebrew words for "set, appoint, ordain, establish," "name, reputation, renown," and "estimate, evaluate," all ideas reflected in Abraham

3:22-23, in which God speaks of the “noble and great ones” of whom He says, “these I will *make* my rulers.” Here the word “make” reflects the Hebrew *sam*, “set, appoint, ordain, establish.” or the Egyptian *s* conveying the idea of “making, doing” or of causation. And, as shown on the chart, we have the word *sam* if we combine the two Egyptian elements together. The meaning of this word (“uniter”) is reflected in the Abrahamic text as well. No. 38, the so-called “royal” linen, also suggests the “noble” and “great” “rulers.”

Nos. 39 and 40 have multiple correspondences as well, indicating that the verses shown in the chart were probably derived from the hieratic words with which we have listed them.

No. 48 is an important correspondence, in that “his” occurs twice in Abraham 4:12-13, and “its” (this word in the masculine possessive is the same as “his” in both Egyptian and Hebrew) occurs three times.

No. 50 is striking, in that the word “the” appears 21 times in the six verses listed in the chart. For the correspondence between *s* and *ts*, see note at the end of this article. The same note explains our correspondences in No. 52, where we find two parallels.

In No. 56 it should be noted that the word “after” in the Book of Abraham is not used in a temporal sense, but rather in a comparative sense. It could be replaced by the expression “according to,” or, as in our comparison, by the word “like” (Egyptian *mi*). The occurrence of *mi* (Heb.: “whose”) immediately followed by *bꜣ* (Egyptian “soul”) and its correspondence to the Book of Abraham’s use of these two words (“whose spirit”) in this same order seems to be more than mere coincidence. It should be noted that *bꜣ*, while sometimes translated “spirit”, is often translated as “soul.” The Hebrew word for “soul” (*nefesh*), which is sometimes used also to designate the spirit (although the Hebrew for this is *ruah*), normally refers to the body plus the spirit (as in D&C 88:15-16), i.e. to a living, *breathing* creature, for whom “the *blood* is the life” (Gen. 9:4; Lev. 17:10, 11, 14; Deut. 12:23). Indeed, this word is sometimes translated “creature” rather than “soul” (cf. Gen. 1:20-21, 24; 2:19). For this reason, we have also associated the Egyptian *bꜣ*, “soul,” with “flesh,” Eve being considered of the same “flesh” as Adam, her husband. It may be, however, that verses 14 through 18 (or, at least, 14 through 16) should be allied with No. 57, for the word “Gods” appears three times in these verses. (In this case, of course, our parallel with “flesh” would not be the prevailing one.)

No. 58, while reflecting both “to” (“unto”) and futurity in Abraham 5:20b, also seems to bear upon

the use of the word “call” in Abraham. The Egyptian symbol is the mouth, and may have been used in reference to speech by whoever allied the Abrahamic text with the Sen-Sen text.

As a final note regarding the arrangement of our chart the reader should be advised that this arrangement, in spite of its numerous correspondences, is not intended to be definitive. Other workers in this field could, conceivably, find better correspondences than those which we have discovered. Moreover, we cannot at present (and we may never be able to) determine exactly how Joseph Smith set up the parallels, for no chart of items beyond No. 29, in the hand of the Prophet, has yet been discovered. Indeed, such a chart may not exist.

The second subject with which we have dealt since the presentation of our paper at the symposium last fall regards possible connections between Abraham himself and the Sen-Sen text.

If we assume that Abraham, in his day, dealt directly with what we now know as the preamble to the Sen-Sen text, we must contend with the problem of the known age of that text. There is no evidence of the Sen-Sen text having existed prior to 600 BC. Considering all logical possibilities, one could contend that the non-existence of the document prior to that date is unprovable, lack of evidence not being a proof. The question of an Abrahamic age for the original of this document may be considered as a point in question. Therefore, to simply deny such a possibility is to beg that question rather than to consider it. True, the lack of an example of the Sen-Sen text of age greater than 600 BC *does* argue against any direct contact between Abraham himself and this text. On the other hand, it is possible to consider Abraham as having authored his own story in oral form, and this oral tradition, after being passed down, as having been adapted (ca. 600 BC) to the Egyptian document by a follower of Abraham, for mnemonic purposes. At this period of history, many Jewish colonies are known to have existed in Egypt.

Considering Abraham, then, as the author of the Book of Abraham, we have the following as possible relationships of the Sen-Sen text to that book:

- a. Abraham wrote the Sen-Sen text as a mnemonic device.
- b. Abraham used the already extant Sen-Sen text as a mnemonic device.
- c. Abraham wrote his story and others adapted the written account to the Sen-Sen text, thus making Abraham’s story an oral account.

Another approach would be to attribute authorship of the Abraham story, as we know it, not to Abraham himself, but to his followers of a later

date, on the basis of pre-existing traditions regarding Abraham. Though a logical possibility, one need not in this case attribute authorship of the Sen-Sen text (with its pagan content) to these followers who used it. Two possible relationships would fit this situation:

- a. The followers composed the Sen-Sen text for use as a mnemonic device in connection with an oral account passed down from Abraham himself.
- b. The followers composed the Abraham story, based on oral traditions passed down to them (and perhaps some sayings actually attributed to Abraham), building it around the already extant Sen-Sen text.

Finally, exhausting the logical possibilities, one may consider Joseph Smith as the "author" of the Abraham story, on the basis of inspiration rather than translation. In this case, the Sen-Sen document would be a purely Egyptian one, never having even been seen by Abraham himself, but a document which *did* provide a message which acted as a "springboard" for the mind of the Prophet to seek inspiration about the meanings of the individual words, which, as we have shown, he must have understood, and the relationship of these to the story of Abraham, with which the Prophet felt them to be connected. And, of course, a *logical* (though improbable) possibility is a purely modern, uninspired authorship. This final possibility is the one most strongly refuted by the fact that Joseph Smith must have known the meaning of the Egyptian words, as we demonstrated in our previous article.

In view of Dr. Hugh Nibley's evidence of Abrahamic elements in the three "Facsimiles" of the Book of Abraham, it is evident that if we do not accept Abraham or one of his followers as the actual author of the Sen-Sen text, then we must account for the Facsimiles in some other way. That the Abrahamic story has a relationship not only to the Sen-Sen text (with which Joseph Smith connected it in his Alphabet and Grammar), but also to the "Facsimiles" is evident from the fact that Joseph Smith included the latter in the *Times and Seasons* publication of the Book of Abraham, and that the text of the Book of Abraham itself refers to at least Facsimile 1 (Abraham 1:12, 14).

It is not impossible that Abraham prepared (or, more probably, *had* prepared for him, as suggested by Dr. Nibley) the Facsimiles, which were then transmitted to his descendants along with the oral (or written) tradition. In any case, it is evident that whoever first related these "facsimiles" to the Sen-Sen and related texts (be it Abraham or one of his followers) is the most likely candidate for the person who adapted the oral tradition to the Sen-Sen text.

The Sen-Sen fragments now in the hands of the Church are probably copies, therefore, of a previous Sen-Sen text which included the facsimiles, for they date, according to Egyptologists who have studied them, from the late Ptolemaic or early Christian era. From the number and types of errors sometimes made in documents of that period, it would appear that scribes of those days were not always conversant with the material they were copying. Such a scribe could easily have reproduced Abraham's facsimiles without being aware of their full significance. Speaking specifically of the copies owned by the Church, Dee Jay Nelson wrote:

The hieratic script on the Ter [Nelson corrected this to read "Hor" in his Part 2] Papyrus Fragments is crude and words are frequently misspelled [*The Joseph Smith Papyri*, 1:41].

It [the Hor Sen-Sen fragment bearing Facsimile 1] is crude to an extreme degree, and generally corrupt. Archaic and basic spelling is employed and in one instance a character is even written backwards. I doubt that the person who wrote these characters understood them. Often scribes and priests, during the late pre-Christian Egyptian times, slavishly copied texts they could not understand, which had been handed down from more ancient times [*The Joseph Smith Papyri*, 1:43-44].

Just how much more of the Book of Abraham might have been published had the Prophet Joseph Smith been able to continue his work, we may not know for some time, if ever. There is also the question of the Book of Joseph, to which the Prophet referred. It is not impossible that all or most of the papyri formerly in the possession of Joseph Smith (including fragments that the Church does not presently possess) were used in conjunction with oral traditions regarding (or by) Abraham and those of his descendants (such as Joseph) who lived in Egypt. We may at this time only speculate regarding such subjects. Yet, in the absence of specific revelation to the contrary, we feel that the evidence will indicate to all serious investigators of this subject that the Prophet Joseph Smith did indeed have a knowledge of the Egyptian hieratic words with which he was dealing, whether one can determine the exact source of the Book of Abraham or not, and that, in view of the lack of Egyptological training in the Prophet's day, the only feasible source for his knowledge was inspiration.

These are the conclusions arrived at in our investigation of the Book of Abraham. We now commend that book to the world for further

investigation along these lines, but moreso than ever, for a spiritual investigation of the matter as well.

A Note on Linguistics. In order for the reader to understand our usage of some Hebrew words homophonous to the Egyptian words in the Sen-Sen text for comparisons in the chart, a brief explanation of some phenomena occurring in Semitic languages, as shown by linguistic analysis, should be provided. It should be noted, first of all, that there are several dental and alveopalatal sounds produced in Semitic (and other) languages that are very similar in sound and in point and manner of articulation. For example, *s* and *š*, while representing different sounds, are similar enough to be undistinguishable to most English-speaking people. These two sounds, as well as *ts* and *š*, are produced by placing the tip of the tongue on the alveo-dental region of the mouth, and by producing a hissing sound. Arabic *š* and Hebrew *ts* were apparently the same sound in Proto-Semitic, for the Arabic cognates of Hebrew words containing the sound *ts* are pronounced with an *š*. We also have clear evidence from the Bible (Judges 12:5-6) that the ancient Jewish Hebraic *š* (spelled "sh" in English) was pronounced *š* by the Ephraimites, who spoke a different dialect of Hebrew. In the same manner, we can compare the number "9," which is *tis'a* in Arabic and *tis'ah* in Hebrew. We likewise find that the *ʔ* (also written *ʔ*), or glottal stop, often corresponds to the *ayin* (ע) from one Semitic language or dialect to another. For example, the Arabic *ʔ umma*, "nation, people" is, in Hebrew, *ʕam*, "nation, people." In Hebrew the classical ע is retained in the Iraqi, Yemenite, and sometimes Sephardic dialects, but becomes *ʔ* in the Ashkenazic and sometimes the Sephardic. As for the *t-d* relationship (as in No. 51), it should be noted, for those unacquainted with linguistic studies, that the *d* is merely a voiced *t*, both being articulated in the same manner and at the same point in the mouth (i.e. the alveolar region in English, but the dental in Semitic). Some Arabic dialects have *k* as a reflex of *q*, while still others use the glottal stop (ʔ).

These comparisons are not given to show that the Egyptian words from the Sen-Sen text are cognates of the Hebrew words that we have indicated in the chart. We merely wish to indicate that, because such correspondences can and do exist in Semitic languages and dialects, it was possible for a bilingual person (speaking Egyptian and Hebrew) to approximate the Egyptian words in Hebrew in order to adapt them to an oral tradition. Thus, while some of the homophones in the chart are approximations, yet they are valid and linguistically sound, for the homophonous pairs would, indeed, be acoustically similar to a speaker of both Hebrew and Egyptian.

114.2 RECENT FINDINGS PUBLISHED. *The Saga of the Book of Abraham*, by Jay M. Todd (Deseret Book Company, Salt Lake City, 1969. 404 pp. \$4.95). Review by Claudia R. Veteto.

Of great interest to Latter-day Saints is *The Saga of the Book of Abraham*, which gives fascinating insights into the origin of the Book of Abraham. Through the author's efforts to elucidate some of the mysteries surrounding the papyri from which a book of scriptures is claimed to have been translated—viz., the location of the tomb from which the papyri came and the circumstances of their discovery, Michael Chandler's role in the mummies' voyage to America, their delivery to Joseph Smith, and their whereabouts after being sold to a Chicago museum—new and valuable information is reported.

From an examination of nineteenth-century private letters and ecclesiastical and commercial records, the birthplace, specific residence, and even personality of Antonio Lebolo are disclosed as well as the character of those persons with whom he associated.

The author provides substantial faith-promoting data on the Prophet Joseph Smith and the manner of translation provided him by the Lord.

Detailed information is also reported on the events and personalities surrounding the recent recovery of the Book of Abraham papyri (November, 1967) by the Church from the Metropolitan Museum of Art of New York City.

The author, an honors graduate of the University of Utah, is currently editor and staff writer for *The Improvement Era* magazine. He has been a staff writer for *The Deseret News*, and has done reporting for United Press International. He has also been a film script writer and audio-visual specialist for the seminaries and institutes of the Church.

As a researcher-writer, the author quotes extensively from heretofore unpublished private and public letters, civic records, and other recent scholarly investigations (including several SEHA publications: Newsletter, 95.7, 101.3, 105.0, and 109.0), all of which are compiled in an interesting and easy-to-read form.

The Saga of the Book of Abraham is an exciting addition to the LDS library and will bring its readers up-to-date on the latest known facts surrounding an important part of one of the Four Standard Works.